

## Materials Testing Frequency Guideline

Delivering excellent, timely and cost effective Materials Engineering Services

Material	Test For	Sampling Location	Frequency	Reference Section
Earthwork, Aggregate Base		Location	requestoy	Treference Geometr
Subgrade	Relative Compaction	Jobsite	One test per compacted area	CSJ 21-1.05
Bedding	Sieve Analysis and Cleanness Value	Stockpile	1 per job minimum	CSJ 1301-2.1
	Sand Equivalent	Stockpile	If required by Sieve Analysis Result	000 1001 2.1
Embankment/Trench Backfill	Relative Compaction	Jobsite	As required for acceptance (min. 1/trench)	CSJ 19-5
Structure Backfill	Sieve Analysis and Sand Equivalent	Stockpile	1 test per job minimum	CSJ 1301-2.2.2
	Relative Compaction	Jobsite	1 test within 5' of basement grade and 1 test	000 1001 2:2:2
			at basement grade	Field group
Aggregate Subbase	Sieve Analysis and Sand Equivalent	Stockpile	1 test per area minimum	CAL 25-1.02A
	R Value	N/A	Certificate of Compliance	
Aggregate Base	Sieve Analysis and Sand Equivalent	Stockpile	1 test per job minimum	CAL 26-1.02
	R value and Durability Index	N/A	Certificate of Compliance	CSJ 26-1.02A
	Relative Compaction	Jobsite	One test per 3' lift	CSJ 26-1.05
Portland Cement Concrete				
Structural Concrete	Compressive Strength	Jobsite	Every 150 cu. yards, 1 per pour min.	ACI 5.6.1
	Slump, Air and Temperature	Jobsite	At sampling	
Minor Concrete	Compressive Strength	Jobsite	Every 300 cu. yards, 1 per job min.	
	Slump, Air and Temperature	Jobsite	At sampling	Field Group
	Flexural Strength	Jobsite	Every 300 cu. yards, 1 per job min.	
Lime Treated Base	, <u> </u>		1 / / / / / / / / / / / / / / / / / / /	<u> </u>
	Spread Rate	Jobsite	One test per day min.	CSJ 24-1.04
	Gradation			
	Relative Compaction			
Asphalt Concrete				
Aggregate	Sieve Analysis	Plant	Every 1000 tons, 1 per job min.	Field group
	Sand Equivalent	1	, , , , , , , , , , , , , , , , , , , ,	
Hot Mix AC	Stabilometer Value (S-Value)	Jobsite	Every 750 tons, 1 per job min.	
	Lab Compacted Density			Field Group
	Maximum Theoretical Density			1
	Percent Air Voids	1		
	Relative Compaction	Jobsite	One test plan per compacted area	CSJ 39-6.03
Slurry Seal				
Aggregate	Gradation	Т		
	Durability Index	Jobsite	One test per day min.	
	Sand Equivalent	1		
Emulsion	Penetration			
	Viscosity	Jobsite	One test per day	Field Group
	Percent Residue			
	Softening Point			
	Spread Rate	Jobsite	One test per day min.	
	Wet Track Abrasion	1		
Chip Seal				
Aggregate	Gradation	Jobsite	One test per job min.	
	Cleanness Value			
	L.A. Rattler			
	Spread Rate	1		
Emulsion	Penetration	Jobsite	One test per day	Field Group
	Viscosity			
	Percent Residue			
	Softening Point			
	Demulsibilty	†		
	Torsional Recovery	†		
Pipe	Transfer (1000 vary			<u> </u>
Reinforced Concrete Pipe	D-Load	Plant	Every 400 LF, Every 100 LF Min.	CSJ 1207-2.1.1
	Cores	Plant	1 set of 4 every 400 LF if = 36"	1207-2.1.1
	Visual Inspection	Jobsite	Every Pipe	CSJ 1207-2.8
	Hydrostat	Plant	= 36": 1 per 400 LF, < 36": as req'd	CSJ 1207-2.8 CSJ 1207-2.1.1
Vitrified Clay Pipe			Submit Certificate of Compliance	Greenbook 207-8.5
	Bearing/Hydrostat			Greenbook 207-8.5
	D-Load		Submit Certificate of Compliance	Croopback 007 0 0 0
	Visual Inspection	Jobsite	Every Pipe	Greenbook 207-8.2.3